Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (currently amended)   A multimedia conversion method comprising:

enabling a user to select a media item that the user desires to have played on a particular rendering device on a network;

requesting the media item from a service provider;

receiving the media item;

determining whether the media item needs intelligent transcoding to be played on the particular rendering device, wherein if the media item needs intelligent transcoding, then intelligently transcoding the media item, wherein intelligent transcoding includes ~~one or more~~ at least one of transcoding, transcaling, transrating, transformatting, and transcripting; and

streaming the media item to the particular rendering device.

2. (original)   The method of claim 1, wherein determining whether the media item needs intelligent transcoding to be played on the particular rendering device further comprises determining whether intelligent transcoding can be performed.

3. (previously amended) The method of claim 2, wherein determining whether intelligent transcoding can be performed comprises:

determining whether the format of the media item can be transcoded;

determining whether a required platform usage to perform intelligent transcoding is available; and

determining whether there is enough bandwidth on the network to perform intelligent transcoding.

4. (original)   The method of claim 3, wherein determining whether the format of the media item can be transcoded comprises using a rules engine to look up rules, based on policy, to determine whether the format of the media item can be transcoded.

5. (original)   The method of claim 1, wherein determining whether the media item needs intelligent transcoding to be played on the particular rendering device includes determining device capabilities for the particular rendering device and determining whether the media format of the media item can be played on the particular rendering device.

6. (original)   The method of claim 5, wherein control points and discovery methods are used to determine the device capabilities.

7. (original)   The method of claim 5, wherein a metadata server is used to determine the device capabilities.

8. (previously amended) The method of claim 1, wherein the transcaling comprises changing the resolution of the media item.

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9. (previously amended) The method of claim 1, wherein the transrating comprises changing or reducing the bitrate of the media item.

10. (previously amended) The method of claim 1, wherein the transcoding comprises converting the format of the media item into another media format.

11. (previously amended) The method of claim 1, wherein the transformatting comprises converting packaging of the media format to another media packaging format.

12. (previously amended) The method of claim 1, wherein the transcripting comprises converting a Digital Rights Management (DRM)/copy protection scheme to another DRM/copy protection scheme.

13. (currently amended) An article comprising: a computer readable medium, encoded with computer executable instructions, wherein when the instructions are executed by a processor, the instructions provide for enabling a user to select a media item that the user desires to have played on a particular rendering device on a network;

requesting the media item from a service provider;

receiving the media item;

determining whether the media item needs intelligent transcoding to be played on the particular rendering device, wherein if the media item needs intelligent transcoding, then intelligently transcoding the media item, wherein intelligent transcoding includes

~~one or more~~ at least one of transcoding, transcaling, transrating, transformatting, and transcripting; and

      streaming the media item to the particular rendering device.

14. (original) The article of claim 13, wherein instructions for determining whether the media item needs intelligent transcoding to be played on the particular rendering device further comprises instructions for determining whether intelligent transcoding can be performed.

15. (original) The article of claim 14, wherein instructions for determining whether intelligent transcoding can be performed comprises instructions for:

      determining whether the format of the media item can be transcoded;

      determining whether the required platform usage to perform intelligent transcoding is available; and

      determining whether there is enough bandwidth on the network to perform intelligent transcoding.

16. (original) The article of claim 15, wherein instructions for determining whether the format of the media item can be transcoded comprises instructions for using a rules engine to look up rules, based on policy, to determine whether the format of the media item can be transcoded.

17. (original) The article of claim 13, wherein instructions for determining whether the media item needs intelligent transcoding to be played on the particular rendering device includes instructions for determining device capabilities for the particular rendering device and determining whether the media format of the media item can be played on the particular rendering device.

18. (original) The article of claim 17, wherein control points and discovery methods are used to determine the device capabilities.

19. (original) The article of claim 17, wherein a metadata server is used to determine the device capabilities.

20. (previously amended) The article of claim 13, wherein the transcaling comprises instructions for changing the resolution of the media item.

21. (previously amended) The article of claim 13, wherein the transrating comprises instructions for changing or reducing the bitrate of the media item.

22. (previously amended) The article of claim 13, wherein the transcoding comprises instructions for converting the format of the media item into another media format.

23. (previously amended) The article of claim 13, wherein the transformatting comprises instructions for converting packaging of the media format to another media packaging format.

24. (previously amended) The article of claim 13, wherein the transcripting comprises instructions for converting a Digital Rights Management (DRM)/copy protection scheme to another DRM/copy protection scheme.

25. (currently amended)   A conversion engine comprising:

a policy manager to provide rules defining applicable media formats in which a particular media format can be transcoded;

a transport manager to gather information from the policy manager, to determine network throughput and platform usage required to perform intelligent transcoding, and to communicate with an application to provide device characteristics and policy information to a graph manager, wherein intelligent transcoding includes ~~one or more~~ at least one of transcoding, transcaling, transrating, transformatting, and transcripting to transform a media format from a service provider to another media format for a rendering device for playing media on the rendering device;

wherein the graph manager puts together an infrastructure for intelligent transcoding and enables intelligent transcoding to be performed.

26. (original) The conversion engine of claim 25, wherein the graph manager comprises:

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a capture filter to capture media input;

a demultiplexer to separate the media input into video and audio components;

a decode/encode to decode the video and audio components and intelligent transcode the video and audio components based on the infrastructure generated by the graph manager;

a multiplexer to combine the transcoded video and audio components into media data; and

a network filter to filter the media data for streaming to the rendering device.

27. (original)   The conversion engine of claim 26, wherein the media data is streamed using HTTP (Hypertext Transport Protocol).

28. (original)   The conversion engine of claim 26, wherein the media data is streamed using RTP (Real-Time Transport Protocol).

29. (original)   The conversion engine of claim 25, further comprising a back channel manager to communicate out of band commands to applications.

30. (original)   The conversion engine of claim 25, wherein the policy manager determines a required platform usage for a particular media format conversion.

31. (currently amended) A home network comprising:

a controller to control the flow of digital multimedia content from one or more

service providers;

a plurality of rendering devices, coupled to the controller, to play the digital

multimedia content; and

a media renderer to connect one or more of the plurality of rendering devices to

the controller;

wherein the controller comprises an intelligent transcoding engine to intelligently

transcode the digital multimedia content from an original media format to a format

suitable for at least one of the rendering devices, wherein to intelligently transcode

comprises one-or-more at least one of to transcode, transcale, transrate, transform, and

transcript.

32. (original)   The home network of claim 31, wherein the controller comprises at

least one of a media center, a set top box, a personal computer, a home server, and a

workstation.

33. (original)   The home network of claim 31, wherein the one or more rendering

devices connected to the controller by the media renderer are incapable of directly

connecting to the controller.

34.   (cancelled)

35. (previously amended) The home network of claim 31, wherein the transcoding comprises converting the format of the digital multimedia content into another media format.

36. (previously amended) The home network of claim 31, wherein the transcaling comprises changing the resolution of the digital multimedia content.

37. (previously amended) The home network of claim 31, wherein the transrating comprises changing or reducing the bitrate of the digital multimedia content.

38. (previously amended) The home network of claim 31, wherein the transformatting comprises converting packaging of the media format to another media packaging format.

39. (previously amended) The home network of claim 31, wherein the transcripting comprises converting a Digital Rights Management (DRM)/copy protection scheme to another DRM/copy protection scheme.